We claim:

1. A method for producing a transgenic cotton plant comprising the steps of:
   (a) obtaining cotton fibrous root explants,
   (b) culturing the fibrous root explants to induce callus formation,
   (c) exposing root callus to a culture of *Agrobacterium tumefaciens* that harbors a vector comprising an exogenous gene and a selectable marker, the *Agrobacterium* being capable of effecting the stable transfer of the exogenous gene and selection agent resistance gene to the genome of the cells of the callus,
   (d) culturing the callus in the presence of the selection agent to which the selection agent resistance gene confers resistance so as to select for transformed cells,
   (e) inducing somatic embryo formation in the selected callus culture, and
   (f) regenerating the induced somatic embryos into whole transgenic cotton plants.

2. The method of claim 1 wherein the cotton fibrous root explants are obtained by growing cotton seedlings in the presence of multi-effect triazole.

3. The method of claim 2 wherein the multi-effect triazole is in a concentration of about 0.05 mg/l to about 0.2 mg/l.

4. The method of claim 3 wherein the multi-effect triazole is in a concentration of about 0.1 mg/l.

5. The method of claim 2 wherein the cotton seedlings are grown in the additional presence of α naphthalene acetic acid.

6. The method of claim 5 wherein the α naphthalene acetic acid is in a concentration of about 0.01 mg/l to about 0.2 mg/l.

7. The method of claim 6 wherein the α naphthalene acetic acid is in a concentration of about 0.05 mg/l.

8. The method of claim 1 wherein the step of regenerating the somatic embryos is carried out in the presence of multi-effect triazole.

9. The method of claim 8 wherein the multi-effect triazole is in a concentration of about 0.05 mg/l to about 0.2 mg/l.

10. The method of claim 9 wherein the multi-effect triazole is in a concentration of about 0.1 mg/l.

11. The method of claim 8 wherein the step of regenerating the somatic embryos is carried out in the additional presence of α naphthalene acetic acid.

12. The method of claim 11 wherein the α naphthalene acetic acid is in a concentration of about 0.01 mg/l to about 0.2 mg/l.

13. The method of claim 12 wherein the α naphthalene acetic acid is in a concentration of about 0.05 mg/l.

14. The method of claim 1 wherein the step of inducing callus formation is carried out in a callus inducing culture medium comprising myo-inositol, vitamin B_1 and a dimethylallyl(amino)purine.

15. The method of claim 1 wherein the step of inducing somatic embryo formation is carried out in a somatic embryo inducing culture medium comprising myo-inositol, vitamin B_1, and a dimethylallyl(amino)purine.

16. The method of claim 14 wherein the callus inducing culture medium comprises myo-inositol in an amount from 50 mg/L to 150 mg/L, vitamin B_1 in an amount from 0.2 to 10 mg/L and a dimethylallyl(amino)purine in an amount from 0.1 to 7.5 mg/L.

17. The method of claim 16 wherein the callus inducing culture medium comprises 100 mg/L myo-inositol, 0.4 mg/L vitamin B_1 and 5 mg/L dimethylallyl(amino)purine.

18. The method of claim 15 wherein the somatic embryo inducing culture medium comprises myo-inositol in an amount from 50 to 100 mg/L, vitamin B_1 in an amount from 0.2 to 10 mg/L and dimethylallyl(amino)purine in an amount from 0.01 to 0.5 mg/L.

19. The method of claim 18 wherein the somatic embryo inducing medium comprises 100 mg/L myo-inositol, 0.4 mg/L vitamin B_1 and 5 mg/L dimethylallyl(amino)purine.

20. The method of claim 1 wherein the step of inducing callus formation is carried out in a callus inducing culture medium comprising vitamin B_5, (2,4-dichlorophenoxy)acetic acid, MgCl and glucose.

21. The method of claim 1 wherein the step of inducing somatic embryo formation is carried out in a somatic embryo inducing culture medium comprising vitamin B_5, (2,4-dichlorophenoxy)acetic acid, MgCl and glucose.

22. The method of claim 20 wherein the callus inducing culture medium comprises vitamin B_5 in an amount from 0.2 mg/L to 10 mg/L, (2,4-dichlorophenoxy)acetic acid in an amount from 0.05 mg/L to 0.15 mg/L, MgCl in an amount from 0.4 mg/L to 1.2 mg/L and glucose in an amount from 1% to 5%.

23. The method of claim 22 wherein the callus inducing culture medium comprises 0.4 mg/L vitamin B_5, 0.1 mg/L (2,4-dichlorophenoxy)acetic acid, 0.8 mg/L MgCl and 3% glucose.

24. The method of claim 21 wherein the somatic embryo inducing culture medium comprises vitamin B_5 in an amount from 0.2 mg/L to 10 mg/L, (2,4-dichlorophenoxy)acetic acid in an amount from 0.05 mg/L to 0.15 mg/L, MgCl in an amount from 0.4 mg/L to 1.2 mg/L and glucose in an amount from 1% to 5%.

25. The method of claim 24 wherein the somatic embryo inducing medium comprises 0.4 mg/L vitamin B_5, 0.1 mg/L (2,4-dichlorophenoxy)acetic acid, 0.8 mg/L MgCl and 3% glucose.

26. A method according to any of claims 14-25, wherein the medium further comprises gellan gum.

27. A method according to claim 26 wherein the gellan gum is present in an amount from 1.0 g/L to 3.0 g/L.

28. The method of claim 1 wherein the step of inducing somatic embryo culture is carried out in a somatic embryo-inducing medium comprising a nitrate in an amount from 1900 mg/L to 5700 mg/L.

29. The method of claim 28 wherein the somatic embryo-inducing medium comprises 3800 mg/L nitrate.

30. A method according to either claim 28 or 29, wherein the nitrate is $NaNO_3$.